IN THE CLAIMS

1. (currently amended)A helical shielded twisted pair data cable comprising

an insulated twisted pair cable,

a shielding tape selected from the group consisting of a metal tape, a first composite tape having a non-metal base and a layer of metal on one side of said base, and a second composite tape having a non-metal base and a layer of metal on both sides of said base;

said shielding tape being helically wrapped with an overlap around said twisted pair cable;

said shielding tape having a metal thickness of 0.33 to 2.00 mils;

said shielding tape being wrapped around said twisted pair at a tension ~~that~~ to eliminates a substantial amount of the air ~~and~~ to leaves a cross-sectional void area of less than 25% of the cross-sectional area of the shielded twisted pair cable to provide said helical shielded twisted pair data cable ; and

to provide said helical shielded twisted pair data cable ~~twisted-pair-data-cable~~ with an adjusted to 20^0C. standard impedance deviation of 3.5 or less when said standard deviation is calculated around a mean or average impedance of 50 to 200 ohms.

2. (original) The cable of claim 1 wherein,

said cable has a rating at least out to 600 MHz; and

said standard impedance deviation is measured on a 328 ft. or longer cable with at least 350 frequency measurements taken from 1.0 to 600 MHz and said standard impedance deviation is 3.5 or less and calculated around the mean or average impedance of 90 to 110 ohms.

3. (original) The cable of claim 2 wherein

said cross-sectional void area is less than 18%; and

said shielding tape has a metal thickness of 0.75 to 1.25 mils.

4. (original) The cable of claim 2 wherein,

said shielding tape has a width of 0.5 to 1.5 inches, and is helically wrapped with the overlap of 25-65% and at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$.

5. (original) The cable of claim 3 wherein

said shielding tape has a width of 0.5 to 1.5 inches, and is helically wrapped with the overlap of 25-65% and at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$.

6. (original) The cable of claim 1 further comprising

at least four of said helical shielded twisted pair cables,

a jacket surrounding said at least four bound helical shielded twisted pair cables to provide a high performance data cable;

said high performance data cable is rated at least out to 600 MHz;

said high performance data cable has an adjusted to 20^0C. average standard impedance deviation of 3.5 or less when taken on a 328 ft. or longer high performance data cable; and

said average standard impedance deviation is the average of all of the standard impedance deviations measured on each of said at least four helical-shielded twisted pair cables with at least 350 frequency measurements from 1.0 to 600 MHz and calculated around the mean or average impedance of 90 to 110 ohms, and no single standard impedance deviation is greater than 4.5 from said mean or average impedance.

7. (original) The cable of claim 6 wherein

said shielding tape has a width of 0.5 to 1.5 inches, and is helically wrapped with the overlap of 25-65% and at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$.

8. (original) The cable of claim 7 wherein

said cross-sectional area is less than 18%; and

said shielding tape has a width of 0.75 to 1.25 inches, and is helically wrapped with the overlap of 45-55% and at a angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$.

9. (original) The cable of claim 8 wherein the cable is bundled prior to being jacketed.

10. (original) A method of preparing a helical twisted pair data cable comprising

providing an insulated twisted pair cable;

helically wrapping said twisted pair cable with a metal shielding tape to provide a helical shielded twisted pair cable with an overlap of said shielding tape and said shielding tape having a metal thickness of 0.33 to 2.00 mils, and said shielding tape being selected from the group consisting of a metal tape, a first composite tape having a non-metal base and a layer of metal on one side of said base, and a second composite tape having a non-metal base and a layer of metal on both sides of said base; and

helically wrapping the metal shield at a tension that provides said helical shielded twisted pair cable with an adjusted to 20^0C. standard impedance deviation of 3.5 or less when said standard impedance deviation is measured on a 328 ft. or longer cable with at least 350

frequency measurements being taken and the standard impedance being calculated around a mean or average impedance of 50 to 200 ohms.

11. (original) The method of claim 10 wherein

said shielding tape has a metal thickness of 0.75 to 1.25 mils,

wrapping and binding the twisted pair cables so that said cross-sectional void area is less than 25%, and said cable having a rating out to 600 MHz,

said at least 350 frequency measurements are taken from 1.0 to 600 MHz, and

said standard impedance deviation is 3.5 or less and calculated around the mean or average impedance of 90 to 110 ohms.

12. (original) The method of claim 10 further comprising

bundling at least four of said helical shielded twisted pair cables; and

extruding a jacket over the at least four bundled helical shielded twisted pair cables to provide a high performance data cable.

13. (original) The method of claim 11 comprising

helically wrapping said metal shielding tape with an overlap of 25-65% and at an angle to the longitudinal axis of the twisted pair cable of $30\text{-}45^0$;

said shield is a shorted metal shielding tape; said a cross-sectional void area is less than 25%;

said shielding tape has a metal thickness of 0.75 to 1.25 mils and a width of 0.5 to 1.5 inches.

14. (original) The method of claim 13 comprising

helically wrapping said metal shielding tape with an overlap of 45-55% and at an angle to the longitudinal axis of the twisted pair cable of $35\text{-}45^0$;

said shield is a shorted metal shielding tape; said a cross-sectional void area is less than 18%;

said shielding tape has a metal thickness of 0.75 to 1.25 mils and a width of 0.5 to 1.5 inches.

15. (original) The method of claim 13 further comprising

bundling at least four of said helical shielded twisted pair cables; and

extruding a jacket over the at least four bundled helical shielded twisted pair cables to provide a high performance data cable.

16. The method of claim 14 further comprising

bundling at least four of said helical shielded twisted pair cables; and

extruding a jacket over the at least four bundled helical shielded twisted pair cables to provide a high performance data cable.

17. (original) The method of claim 16 wherein said high performance data cable is rated out to at least 600 MHz and has an average standard impedance deviation of 3.5 or less when taken on a 328 ft. or longer high performance data cable and said average standard impedance deviation is the average of all of the standard impedance deviations measured on each of said at least four helical-shielded twisted pair cables with at least 350 frequency measurements from 1.0 to 600 MHz and calculated around the mean or average impedance of 90 to 110 ohms, and no single standard impedance deviation is greater than 4.5 from said mean or average impedance.